

# Teacher- and School-Related Factors Influencing Implementation of the Daily Physical Activity (DPA) Policy in Ontario Elementary Schools

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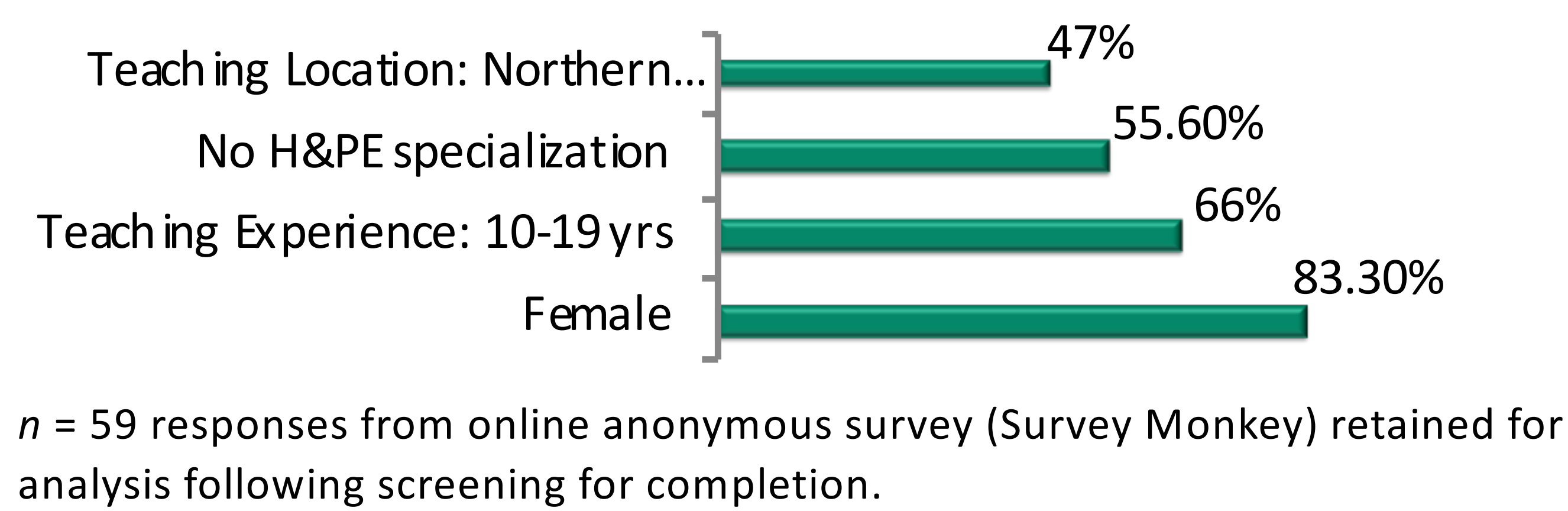
## Introduction

- Ontario's DPA policy mandates that all elementary school children participate in 20 minutes (duration) of sustained moderate to vigorous physical activity (MVPA) (intensity) during instructional time each school day (frequency) (Ontario Ministry of Education [OMOE], 2005). However, province-wide research suggests that only 50% of elementary teachers adhere to the DPA policy (Public Health Ontario, 2015).
- To date, the literature specific to Ontario's DPA policy has concentrated on Southern regions of the province, neglecting Northern perspectives. Schools in Northern regions have the lowest average elementary school sizes (People for Education, 2012) and therefore receive less monetary support from the province (People for Education, 2015), thus introducing variability in implementation settings.
- Further, there is a paucity of research linking teaching strategies to implementation fidelity. Teachers' behaviour, perspectives, and motivation to comply with the beliefs of their school's administration and broader social culture contribute to varying implementation contexts, and in turn to the students' exposure to PA opportunities (Martin et al., 2001).
- In order to facilitate context-specific delivery modifications that will benefit students province-wide, this study addressed the need to identify key strategies for improved DPA implementation, and to determine if strategic target areas are the same within a more Northern sample versus those studied in previous research.

**Purpose:** To examine elementary school teachers' self-reported adherence to Ontario's DPA policy, and to explore delivery models as well as teacher- and school-level factors influencing its implementation.

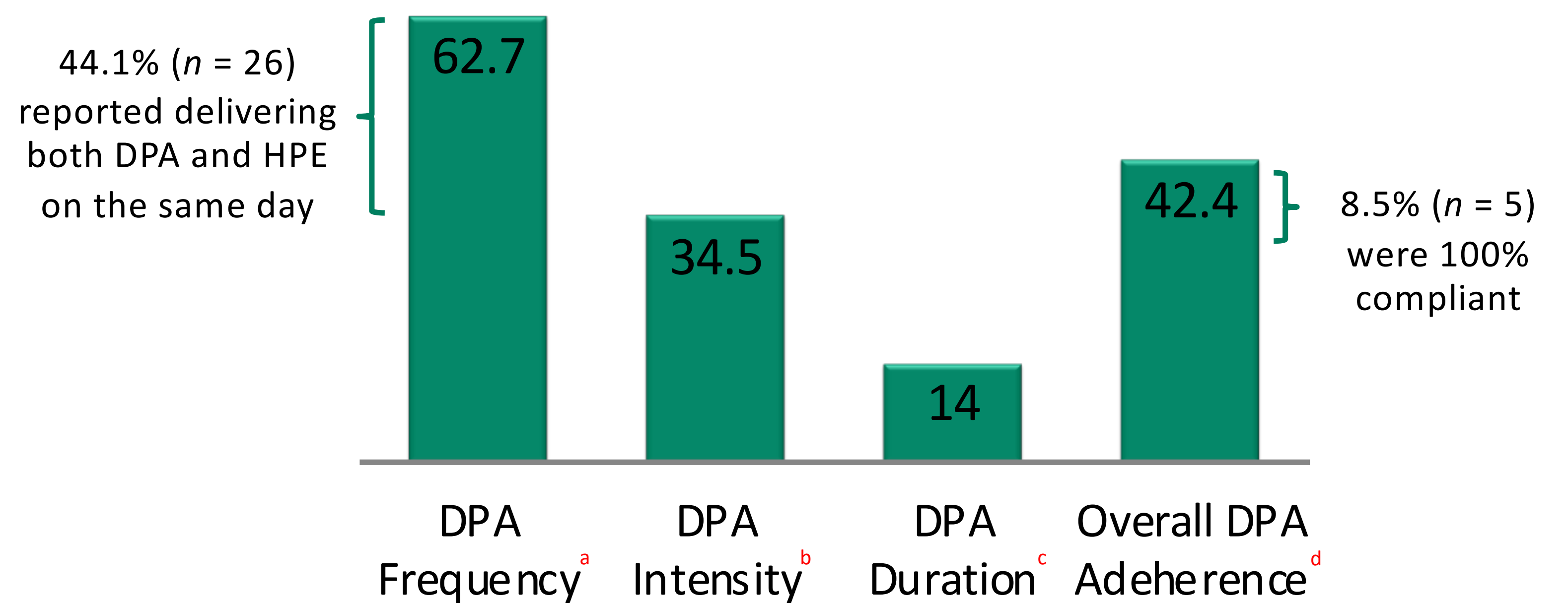
## Participants and Methods

Self-identified Ontario elementary school teachers ( $n = 66$ ) recruited through snowball sampling.



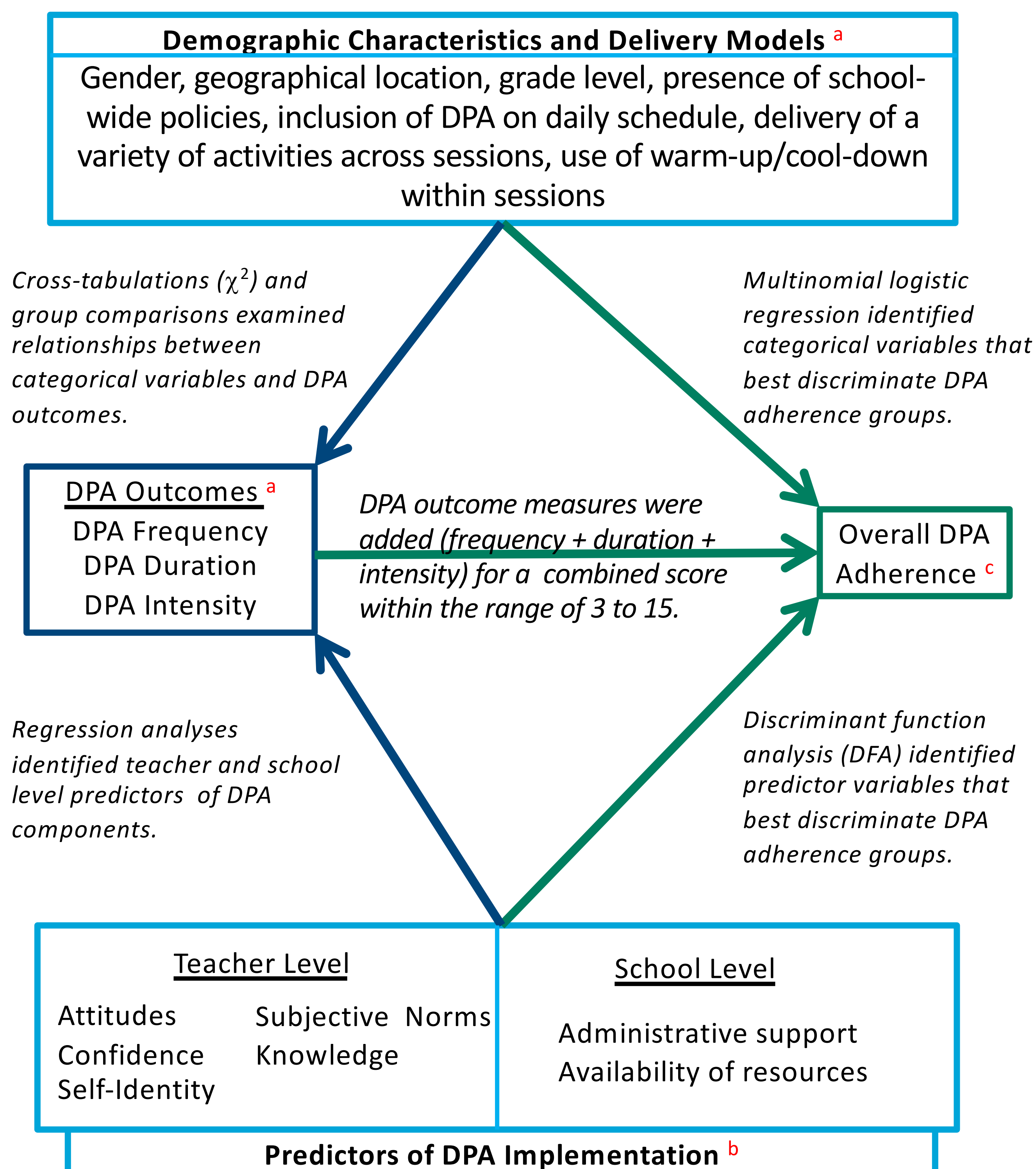
## Results

### Percentage of Teachers Reporting Compliance: Who's Implementing DPA and How?



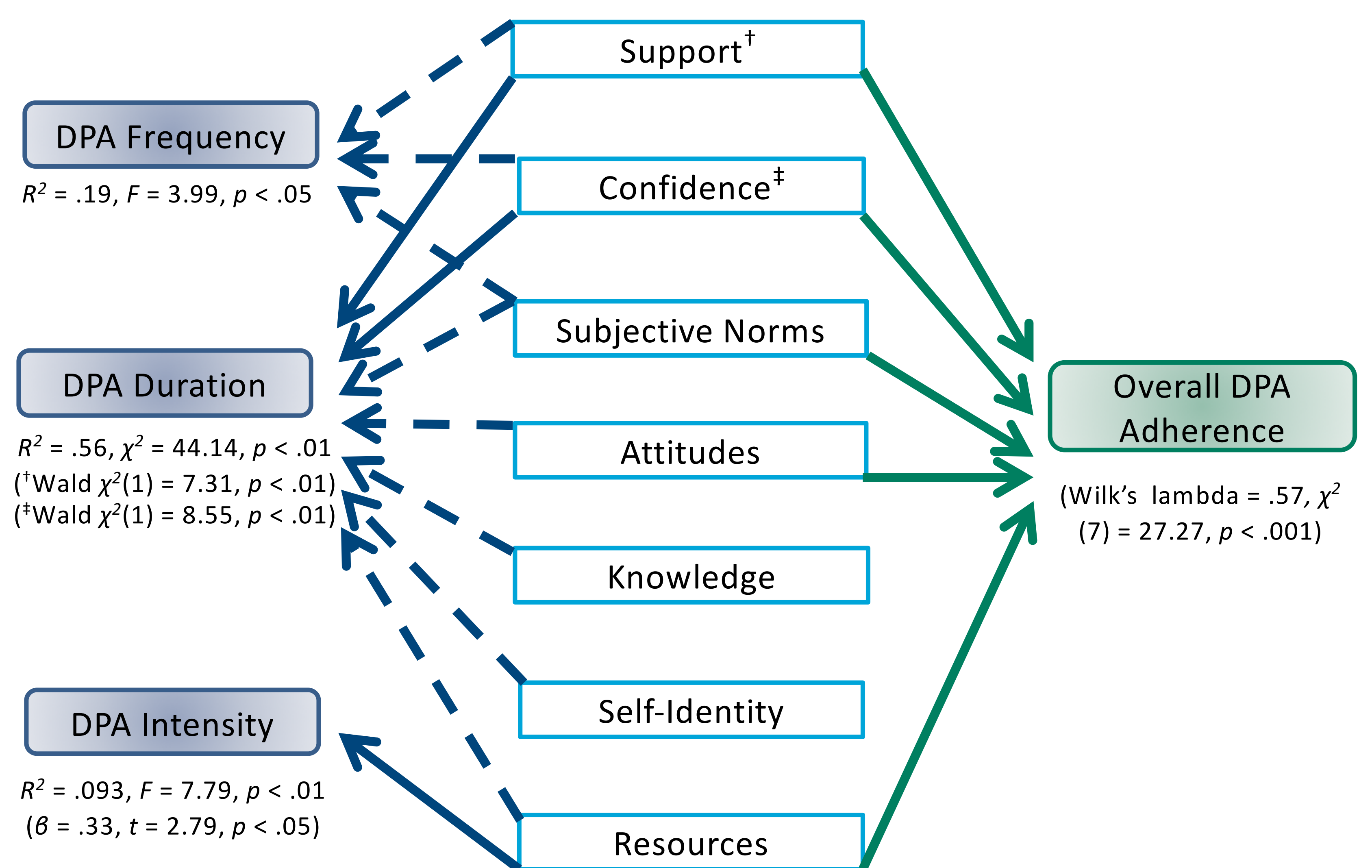
- <sup>a</sup> DPA Frequency = DPA and/or HPE classes occurred 5 days per week. Significantly increased for teachers who used a wide variety of activities, ( $\chi^2(4) = 10.11, p < .05$ ) and reported teaching at a school with a school-wide position on PA curricular education ( $\chi^2(4) = 14.34, p < .01$ ).
- <sup>b</sup> DPA Intensity = PA during DPA sessions was moderate to vigorous for at least 20 minutes.
- <sup>c</sup> DPA Duration = DPA sessions were always delivered for the full 20 minutes. Significantly longer for teachers who included DPA on the posted schedule ( $\chi^2(2) = 6.68, p < .05$ ), used a wide variety of activities ( $\chi^2(4) = 20.47, p < 0.001$ ), and included a warm-up/cool-down in individual DPA sessions ( $\chi^2(4) = 13.47, p < 0.01$ ).
- <sup>d</sup> Overall DPA adherence = scores  $\geq 4$  for each outcome, which corresponds to at least 77% compliant. Significantly more likely to incorporate a variety of activities across DPA sessions (Wald  $\chi^2(1) = 5.43, p < .05$ ).

## Conceptual Model: Measures and Data Analysis



- <sup>a</sup> Measured with multiple choice questions.
- <sup>b</sup> 5-point Likert scale measured school- and Theory of Planned Behaviour-informed teacher-level predictors.
- <sup>c</sup> Calculated scores were converted to a binary variable: implementers (scores  $\geq 12$ ) and non-implementers (scores  $< 12$ ).

### Why are Teachers (Not) Delivering DPA as Prescribed?



**Multiple regressions:** Solid lines represent significant predictors; dashed lines represent non-significant contributors to the model.

**DFA:** Solid lines represent measures that significantly discriminate between DPA adherence groups ( $ps < .05$ ).

## Discussion and Conclusion

- The majority of the participants were classified as not adhering to the DPA policy guidelines, with a median implementation score of 69%, which corroborates national (Olstad et al., 2015) and provincial (Patton, 2012; PHO, 2015) self-reported findings, as well as those derived from objectively measured PA levels in southern Ontario elementary schools (Stone et al., 2012).
- This study adds to the findings that consider the policy's individual components (PHO, 2015; Stone et al., 2012) and highlights the need for implementation strategies at the policy- (e.g., increase its accountability and flexibility), school- (e.g., implement school-wide position on curricular PA), and teacher- (e.g., increase awareness of existing curriculum support and implementation guides) levels.
- Recommendations advocate for: the inclusion of DPA on teachers' daily schedules; dissemination of information to key stakeholders (e.g., DPA links/infographics in school newsletters, discussion of innovative implementation strategies in staff meetings); and, increased collaboration between teachers and health promoters/DPA 'champions' (e.g., DPA workshops).